

L 4218-66

ACC NR: AP5026353

the great differences which exist in the thermal stabilities of different fresh-fuel
lots produced at the same geographical location. Orig. art. has: 1 table. [SM]

SUB CODE: FF/ SUBM DATE: 00 / ORIG REF: 002/ OTH REF: 002/ ATD PRESS 4/21

Card 2/2

RP

MELENT'YEVA, N.I.

Increasing the accuracy of the volumetric-weight method for determining
the quantity of petroleum products. Transp. i khran. nefti i nefteprod.
no.11:15-17 '64. (MIRA 18:1)

MELENT'YEVA, N.I.

Effect of the error of temperature corrections on the value of the
density of petroleum products. Khim.i tekhn.topl.i masel 8 no.2:
62-63 F '63. (MIRA 16:10)

MIKHAYLOV, Mikhail Mikhaylovich, prof., doktor tekhn.nauk. Prinimali uchastiye: ALEKSANDROVA, L.I., kand.tekhn.nauk; TOLVINSKAYA, A.V., kand.tekhn.nauk; IVASHCHENKO, S.A., kand.tekhn.nauk; MELENT'YEVA, N.N., inzh.; RODIONOVA, N.A., inzh.; FOGEL'GEZANG, Ye.V., inzh. RENNE, V.T., prof., doktor tekhn.nauk; ZHITNIKOVA, O.S., tekhn.red.

[Moisture absorption by organic dielectrics] Vlagopronitsaemost' organicheskikh dielektrikov. Pod red. V.T.Renne. Moskva, Gos. energ.izd-vo, 1960. 162 p. (MIRA 13:10)
(Dielectrics)

2070. THERMAL DISSOCIATION OF SOLID FUEL. III. COAL AND ITS PETROGRAPHIC CONSTITUENTS. Bjokava M K and Melentseva N V (J. appl. chem. russ 1943, 16, 296-307. Brit abst 1945, B 1 54). A coal is more sol. in tetrahydronaphthalene at 400 the younger it is e.g., of coals containing 41% of volatile substances, 63-70% was dissolved but only 0.6% of graphite was extracted. The solubility decreases in the order: Clarain > vitrain > durain > fusain. Copal is completely sol. and so are resin inclusions in a coal. The extracts melt at 70-90 both the extracts and the insol. residues contain more C and H than the original coals.

USSR/Chemistry - Liquid Fuels

Jul. 52

"Properties of Diesel Fuels at Low Temperatures,"
P. I. Sanin, N. V. Melent'yeva

"Trudy Inst Nefti" Vol 2, pp 39-46

PA24379
Established that in 3 moisture-free samples of diesel fuel (Bala kha n winter grade (I), Surakha n summer grade (II), Tuymazy summer grade (III)) the temps of clouding are determined by the crystallization of hydrocarbons. Structure formation in diesel oils at low temps is analogous to that in lubricating oils. Coagulation point depressants (Paraflo w Alkylphenol 10, Alkylphenol 11, etc.) retard the transition of the

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diesel oils into the colloidal state. I is the oil least susceptible to the action of depressants, III the most susceptible. While the temp of congelation of III could be lowered to the standard value by the addition of depressants, the clouding point could not. New depressants will be tested and the filterability of fuels at low temps investigated.

MELENT'YEVA, N. V.

24379

Adsorption of surface-active substances on paraffin wax.
P. I. Saitin, N. V. Zelenova, and Yu. M. Zelenova.
Colloid J. (U.S.S.R.) 18, 793-6 (1956) (English transl.
Don). - See C.A. 51, 0063f.

R. M. R.

PM 7/7

5
4E2C
4E2D
4E2H

~~MELENT'YEV, N. V.~~
Adsorption of surface-active substances on paraffin wax.
I. Sanin, N. V. Melent'eva, and Yu. M. Zelenova
(Petroleum Inst., Acad. Sci. U.S.S.R., Moscow). *Kolloid.
Zhur.* 18, 745-7 (1956). --Dialkylphenol, used as pour-point
depressant, was adsorbed by solid paraffin wax (approx.
 $C_{25}H_{52}$) from an isooctane soln.; the amt. adsorbed reached a
max. (0.28 g./g.) when a 0.15M soln. of dialkylphenol was
used. I. I. Bykerman

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SAHIN, P.I.; MELENT'YEVA, N.V.

Effect of the structure of hydrocarbons on their viscosity. Trudy
Inst.nefti 13 '59. (MIRA 13:12)
(Hydrocarbons) (Viscosity)

1. *Journal of the American Medical Association*, 1964; 191: 1001-1002.
 2. *Journal of the American Medical Association*, 1964; 191: 1002-1003.
 3. *Journal of the American Medical Association*, 1964; 191: 1003-1004.

[illegible][illegible]

The following are the results of the analysis of the data obtained from the experiments conducted on the effect of the concentration of the solution on the rate of the reaction:

Concentration of the solution (M)	Rate of the reaction (1/min)
0.1	0.05
0.2	0.10
0.3	0.15
0.4	0.20
0.5	0.25
0.6	0.30
0.7	0.35
0.8	0.40
0.9	0.45
1.0	0.50

The results show that the rate of the reaction increases linearly with the concentration of the solution. This indicates that the reaction is first order with respect to the concentration of the solution.

of which is now in receipt, the following information is being prepared. The results of the investigation of the above mentioned cases will be reported to the appropriate authorities. The results of the investigation of the above mentioned cases will be reported to the appropriate authorities. The results of the investigation of the above mentioned cases will be reported to the appropriate authorities.

3
1/2

Inst Petrochemical Synthesis, AS USSR

36934
S/081/62/000/007/026/033
B168/B101

119700
AUTHORS:

Sanin, P. I., Sher, V. V., Chernyavskaya, L. F., Melent'yeva,
N. V., Glukhoded, I. S.

TITLE:

Dialkyldithiophosphates of metals as anti-oxidants for
lubricating oils

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 7, 1962, 548, abstract
7M184 (Sb. "Prisadki k maslam i toplivam". M.,
Gostoptekhizdat, 1961, 85-94)

TEXT: The influence of dialkyldithiophosphates of metals of different
structures (in the form of industrial additives $\Delta\Phi$ -1 (DF-1), $\Delta\Phi$ -2 (DF-2),
 $\Delta\Phi$ -5 (DF-5), $\Delta\Phi$ -8 (DF-8), $\Delta\Phi$ -9 (DF-9), $\Delta\Phi$ -10 (DF-10), $\Delta\Phi$ -11 (DF-11),
and $\Delta\Phi$ -12 (DF-12)) on the oxidation of oil ΔC -8 (DS-8) (from sulfur-
containing petroleums) and its hydrocarbon fractions, separated
chromatographically, was investigated. Oxidation of the oil was determined
from oxygen absorption in a closed system. The anti-oxidant action of the
dialkyldithiophosphates in the paraffin-naphthene fraction was considerable
at test temperatures of 120-150°C; it depended on the structure of the

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Dialkyldithiophosphates of ...

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additive and falling as the temperature rose, to reach a negligible value at 200°C. The additive DF-1 (barium dialkyldithiophosphate with the alkyls C₂₀-C₂₄) was found to be the most powerful anti-oxidant, having an effectiveness roughly equal to that of ionol. In the paraffin-naphthene fraction the additives of sulfonate type (азнии-4 (aznii-4) washing component of азнии-5 (aznii-5) and ПМС_Я (PMS_{Ya})) and of alkylphenolate type (Внии НП-350 (vnii np-350)) did not greatly reduce the rate of oxidation. Much more active in the same fraction of oil were the additives of alkylphenolate type, which also contain sulfur or phosphorus in the form of sulfides and dithiophosphates (циатим-339 (tsiatim-339), Паранокс-56А (Paranox-56A), Внии НП-360 (vnii np-360), Внии НП-361 (vnii np-361), ИП-22к (IP-22k), although their effectiveness was lower than that of additive DF-1. The additive DF-1 did not reduce the rate of oxidation of oil DS-8, which contains natural inhibitors and is sufficiently stable without additives. The oil becomes unstable in the presence of metals (Cu, Fe and CuO), when the natural inhibitors are not sufficiently effective. The inhibitor DF-1 passivated the metals and raised the stability of the oil to approximately the same value as in the absence of metals.

[Abstracter's note: Complete translation.]

Card 2/2

40245
S/081/62/000/014/025/039
B166/B144

15700
AUTHORS: Sanin, P. I., Chernyavskaya, L. F., Sher, V. V.,
Melent'yeva, N. V.

TITLE: On the mechanism of the detergent action of additives

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 14, 1962, 536, abstract -
14M237 (Sb. "Prisadki k maslam i toplivam." M.,
Gostoptekhnizdat, 1961, 174 - 184)

TEXT: The action of dialkyl-dithio phosphates of Ni ((I) di-n-butyl-,
di-n-decyl- and di-n-octadecyl thiophosphate) as model detergent
additives to motor oils was studied. Surface tension isotherms were taken
of solutions of (I) in benzene and heptane on the solvent - water interface;
also adsorption isotherms of (I) on carbon black suspended in toluene.
These isotherms show that I are surfactants and are adsorbed both on the
hydrocarbon - water interface and on the surface of carbon black. Com-
parison of electron microscope photographs (magnification x 15,700) of
carbon black collected from its suspensions in toluene with and without
(I) shows that (I) prevent agglutination of particles of carbon black,

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On the mechanism of the...

or that they separate large carbon black aggregates which have already agglutinated. The maximum number of molecules of I adsorbed by one particle of thermal black or channel black is calculated from the average diameter of the particles of carbon black in suspension, determined from the photograph ($720 \text{ \AA}$ for thermal black and $306 \text{ \AA}$ for channel black), and from the maximum quantity of adsorbed (I); the following respective values being obtained: $47.7 \cdot 10^7$ and $10.2 \cdot 10^4$ molecules for di-n-butyl-dithio phosphate, $20.5 \cdot 10^7$ and $7.3 \cdot 10^4$ molecules for di-n-decyl-dithio phosphate, $17.5 \cdot 10^7$ and $5.7 \cdot 10^4$ molecules for di-n-dioctadecyl-dithio phosphate. The stabilization of a suspension of carbon black in the presence of (I) was studied by determining the full sedimentation time of the carbon black when at rest, or by centrifuging and determining the change in the concentration of carbon black in suspension with time. It was found that (I) have a considerable stabilizing effect even at a concentration of 0.1%, whereas the disulphide $[(C_{18}H_{37}O)_2P(S)_2]_n$, which has a similar structure, produces almost none of this effect.

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On the mechanism of the...

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no detergent properties to motor oils. Di-n-octadecyl-dithio phosphate of Zn is considerably less active as a stabilizer of a suspension of carbon black than di-n-octadecyl-dithio phosphate of Ni, which corresponds to their relative detergent efficiency in motor oils. It is concluded that detergent additives, which should more correctly be called dispersive additives, in motor oils are adsorbed on the surfaces of oil-insoluble particles which form when the oil is working, whereby they prevent these particles flocculating and also prevent their deposition on parts of the engine. 31 references. See also RZhKhim, 1962, 5M219. [Abstracter's note: Complete translation.]

Card 3/3

1583 2209

25783
S 000/6-139/00-101
E 00/B220

119700

AUTHORS: Sarin P. I., Sher, V. V., Chernyavskaya, L. E., and
Melent'yeva, N. V.

TITLE: Antioxidants of the type of dialkyl dithio phosphates of
metals

PERIODICAL: Akademiya nauk SSSR Doklady, v. 137, no. 2, 1961, 395-395

TEXT: In continuation of their previous papers (P. I. Sarin, V. V. Sher,
Ref. 1: DAN 107, no. 4, 55, 1956) and P. I. Sarin, V. V. Sher, 2, 11
Khim. i tekhnol. topliv. masel, no. 3, 15, 1956), the authors report the
results of their studies regarding dialkyl dithio phosphates D.
metals as antioxidants of hydrocarbons in inert atmospheres. The
oxidizing activity of D of metals of different structures was studied and
the influence of certain factors on the oxidation process in the presence of
these additions was shown. Table 1 shows the structure of the available
additions. The additions DPA, DPn, and DPm are sodium dialkyl dithio
phosphates while the others are dimethyl dithio phosphates. The
molecular alcohols produced by direct oxidation of the paraffin oxidation

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S/010/61/13-0001-1017

F 13/12/61

X

Antioxidants of the type of dialkyl

330-390°C were used to obtain DP-1 and DP-2. Alcohols produced by oxidation of the paraffin fraction 270-330°C were used to obtain DP-3. The molecular weight of the alcohols decreased as the temperature of oxidation increased. DP-4 was obtained based on secondary alcohol, the product of the oxidation of DP-9 and DP-12 based on the primary alkyl alcohol. DP-10 and DP-11 as well as DP-12 were prepared from two alcohols and contained, thus, radicals of different structure. Most of the hydrocarbons which were oxidized were naphthalene, but some of the hydrocarbons of the naphthalene containing napthalene by side chain oxidation. The oxidation rate of the hydrocarbons was determined based on the oxidation of naphthalene in the closed system. All DP-12 details show more or less the oxidation rate of the hydrocarbons, thus they can be called typical antioxidants. The activity of the antioxidants varied, however, dependent on the structure of the hydrocarbon radicals and the nature of the radicals. Barium DP-12 containing secondary hydrocarbon radicals turned out to be the most active one. Fig. 1 shows results of the oxidation of naphthalene hydrocarbons at different temperatures in the presence of DP-12 (high-molecular carbon DP). The DP antioxidants show their highest activity at temperatures up to 350°C.

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S/020/61/139/001/013/017

B*03/B220

Antioxidants of the type of dialkyl

On transition to higher temperatures the activity of the antioxidants is reduced, probably due to thermal decomposition. The optimum concentrations of various additions amounted to 0.75-2.5% at the conditions mentioned. The oil where-from unstable paraffin-naphthene hydrocarbons were isolated contained also monocyclic and bicyclic aromatic hydrocarbons and a small compounds. Certain aromatic hydrocarbons are natural antioxidants for the unstable oil hydrocarbons. Therefore, the oil itself is highly stable. The natural inhibitors contained in the oil paralyze the action of synthetic DP antioxidants. In these circumstances, the effect of the latter on the oxidation process of the oil itself is negligible. It should be noted that metals and their oxides (Fe, Cu, NiO) represent a serious source of oxidation of hydrocarbons. It is noted that the oil remains stable in the presence of metals, although it contains natural inhibitors. The catalytic action of metals can be reduced or eliminated by the use of metal salts. The addition of DP antioxidants to stabilize the oil in the presence of metals. Apparently DP antioxidants are adsorbed as a thin layer of substances on the metallic surface and thus, reduce a direct contact of the oil on the stability of the oil on oxidation. The latter effect is due to the oxygen. [Abstractor's note: essential. for the trans. st. r.]

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25783

S/OPO/61/11/10/10/1/1/1

8101/3270

Antioxidants of the type of dialkyl

figure, 1 table, and 1 Soviet-bloc reference

ASSOCIATION: Institut neftekhimicheskoy i petrokhimicheskoy Akademii Nauk SSSR
(Institute of Petrochemical Synthesis, Academy of Sciences, USSR)

PRESENTED: February 3, 1961 by A. V. Kiselev, A. A. Kiselev

SUBMITTED: February 7, 1961

Table 1 Structure of additions of the type of dialkyl dimethyl phosphite salts.

Legend: 1) denomination of the addition, 2) formula R_2O_2P

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S/020/61/140/001/023/024
B130/B101

AUTHORS: Sanin, P. I., Chernyavskaya, L. F., Sher, V. V., and
Melent'yeva, N. V.

TITLE: Synthetic dispergator-type additives

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 1, 1961, 176-178

TEXT: The washing effect of additives to lubricating oil is explained here by their adsorption on the insoluble particles of the oil suspension. Thus, dispersion and stabilization of the suspension are achieved. Most of the tests were made with polyfunctional additives of the Ni-dialkyl dithiophosphate type (I). $[(C_{18}H_{37}O)_2PSS]_2Ni$ has excellent washing properties, as shown by P. I. Sanin and V. V. Sher (Khimiya i tekhnologiya topliv i masel, no. 3, 38 (1957)). Carbon black suspended in toluene containing a certain quantity of (I) was used as a model suspension. The quantity of (I) adsorbed on carbon black was calculated indirectly by determining the quantity of (I) remaining dissolved, after adsorption equilibrium had been reached and the carbon black separated. The

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Synthetic dispergator-type additives

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difficulty of determining the slight additives in the dilute hydrocarbon solutions was overcome as follows: After toluene had been separated (I) was decomposed with a mixture of nitric and sulfuric acids, and the nickel was determined colorimetrically with dimethyl glyoxime. The results of adsorption of various (I) on carbon black are illustrated in Fig. 1. The quantity of adsorbed (I) as a function of its equilibrium concentration is a typical adsorption isotherm. This also proves that (I) is actually adsorbed on carbon black. Electron micrographs of the carbon-black preparations show that about $6 \cdot 10^4$ molecules of Ni-di-n-octodecyl dithiophosphate were adsorbed on one particle of carbon black. Owing to the adsorption, the carbon-black particles are covered by a layer of (I) molecules oriented with their hydrocarbon group toward the oil medium. Consequently, the oleophily of the particles increases, and the suspension becomes more stable. The surface of the particles of different types of carbon black is inhomogeneous and more or less oxidized. The polar groups of (I) are adsorbed on carbon black owing to oxidation, and, consequently, the non-polar hydrocarbon groups are oriented toward the oil medium. The stabilization of the suspension was either studied



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Synthetic dispergator-type additives

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by sedimentation or centrifugation the carbon black or determined by measuring the optical density of the carbon-black concentration as a function of time. There are 1 figure and 10 references: 6 Soviet and 4 non-Soviet. The two references to English-language publications read as follows: A. R. Badeley, A. H. Nisson, F. H. Garner, J. Inst. Petrol., 35, No. 303, 141 (1949); F. H. Garner, C. W. Nutta, M. F. Mohtadi, J. Inst. Petrol., 36, No. 317, 292 (1950); *ibid.* 39, no. 358, 677 (1953).

ASSOCIATION: Institut neftekhimicheskogo-sinteza Akademii nauk SSSR
(Institute of Petrochemical Synthesis of the Academy of Sciences USSR)

PRESENTED: April 8, 1961, by A. V. Topchiyev, Academician

SUBMITTED: April 4, 1961

Fig. 1. Adsorption isotherms of Ni-dialkyl dithiophosphates on carbon black. Suspension of carbon black in toluene. The concentration of carbon black is 0.00061%. Legend: (1) Ni-di-n-octadecyl dithiophosphate;

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L 20321-63 EPE(c)/EWI(m)/BDS AFETC/APCC Fr-4 BW/mn/DJ
ACCESSION NR: AT3001987 S/2664/61/000/000/0174/0184

AUTHORS: Sanin, P. I.; Charnyavskaya, L. F.; Sher, V. V.; Melent'yeva, N. V.

TITLE: The mechanism of the action of additives. // On the mechanism of the detergent action of additives.

SOURCE: Prisadki k maslam i toplivam; trudy nauchno-tekhnicheskogo soveshchaniya. Moscow, Gostoptekhizdat, 1961, 174-184;

TOPIC TAGS: lubricant, lubrication, additive, detergent, detergence, dispersive, dispersator, peptizing, agent, peptizator, suspension, adsorption, adsorptive flocculation, Ni, dialkyldithiophosphate, toluene.

ABSTRACT: This paper combines an extensive literature survey on the mechanism of the detergent action of additives with the description of an investigation of the mechanism of dispersive additives. The major portion of the investigation was performed with multipurpose additives of the type of the dialkyldithiophosphates (DADTP) of metals and, especially, of DADTP of Ni, which, as some of the authors have shown previously, exhibit strong detergent qualities. The use of additives consisting of a single compound eliminated the effect of unknown components which ordinarily exist in technical additives. Additives of the type of DADTP of Ni were

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ACCESSION NR: AT3001987

selected also, because their hydrocarbon solutions have a specific (violet) hue, a fact that was utilized for the quantitative colorimetric determination of the concentration of the additive in adsorptional tests. The paper reports an investigation of the surface activity of Ni-DADTP. It is concluded that the Ni-DADTP is a surface-active substance and can be adsorbed from a hydrocarbon medium onto the interface between a hydrocarbon medium and water; it can also be adsorbed on the surface of hydrocarbon particles and soot. Such adsorption prevents the "sticking" (aggregation, flocculation) of soot particles and produces the dispersion (peptization) of enlarged soot particles already formed. In effect, the adsorption causes the soot particles to be covered with a layer of Ni-DADTP molecules. Thereupon the affinity of the particles to oil is sharply improved, and the suspension as a whole remains stabilized. Photographs were taken of soot preparations obtained from soot suspensions in toluene with and without any DADTP additive. An EM-100 electron microscope with 15,700x magnifying power was used. The electron-microscope photographs permitted the determination of the mean magnitude of the soot particles and the mean number of molecules adsorbed on an averaged soot particle. The number of particles in percent of the total was plotted versus the particle diameter. In summary, it is concluded that the global action of additives consists in the increased dispersivity of the oily suspension formed during the operation of the engine and the stabilization of that suspension. In other words, a process of the adsorptional dispersion of the insoluble products in the oil is observed. Inasmuch as, during the

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sticking together of particles (flocculation) in an oil, relatively friable aggregates are formed, their dispersion may be regarded as a process of peptization. Whenever the oily suspension reaches the hottest parts of the engine, and if the additive is not sufficiently surface-active, a desorption of the additive occurs; the disperse phase is then not adequately protected, and the insoluble particles unite into relatively large aggregates (flocculation) and precipitate onto the metallic surface. Hence, the so-called detergent action of additives can be regarded as a dispersive (or peptizing) action and, hence, detergent additives should really be termed "dispersators" or "peptizing agents." "The authors express their gratitude to P. A. Tesner for the preparation of the soot specimens and the electron-microscope photographs." Orig. art. has 7 figures.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR (Institute of Petrochemical Synthesis, AS, USSR).

SUBMITTED: 00	DATE ACQ: 23Jan63	ENCL: 00
SUB CODE: FL, CH, EL	NO REF SOV: 020	OTHER: 011

Card 3/3

ACCESSION NR: AP4017576

S/0065/64/000/003/0062/0066

AUTHORS: Sanin, P.I.; Sher, V.V.; Chernyavskaya, L.F.; Melent'yeva, N.V.; Komissarova, N.I.

TITLE: Stability of oils containing antioxidant and additives of the sulfonate type.

SOURCE: Khimiya i tekhnol. topliv i masel, ⁹no. 3, 1964, 62-66

TOPIC TAGS: oil antioxidant, oil additive, oil, engine oil, lubricating oil

ABSTRACT: In view of the ever increasing use of sulfonate additives (which in themselves are not antioxidants but merely dispersers) to lubricating oils (of the DS-11 type), the authors undertook a study of additives and their combined action with different antioxidants. DS-11 is an oil selectively drawn from eastern, sulfur-rich crudes. Its paraffin-naphthene fraction has a molecular weight of 404, $\rho_{40}^{20} = 0.8627$, $n_D^{20} = 1.4740$, oil viscosity $v_{100} = 66.8$ cst; $v_{100} = 11.35$ cst. The additives studied were: (1) SB-3 (barium sulfonate) and antioxidants DF-1 (barium dialkyldithiophosphate),

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(2) DF-11 (zinc dialkyldithiophosphate), (3) AN-22k (calcium dithiophosphate), (4) V-353 (free dialkylphenyldithiophosphoric acid), and (5) NG-183a (interaction product of terpenes and phosphorus penta-sulfide neutralized with calcium oxide). Their stability was evaluated according to oxygen absorption in a closed system at 150C. It was found that the above antioxidants range according to decreasing activity: DF-11, DF-1, AN-22k, B-353, NG-183a. At great oxidation depth, only the first two increase oil stability. Orig. art. has: 4 figures.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 23Mar64

ENCL: 00

SUB CODE: CH, FL

NR REF SOV: 001

OTHER: 000

Card

2/2

L 55027-55 EWT(m)/EPF(c)/T Pr-4 DI
ACCESSION NR: AP5016842

UR/0204/65/005/003/0399/0405
547.26'118'122.1+66,094.382 27
26

AUTHOR: Sher, V.V.; Melent'yeva, N. V.; Nechitaylo, N. A.; Sanin, P. I.

TITLE: The effect of thermal conversion of metal dialkyl dithiophosphates on their effectiveness as hydrocarbon antioxidants

SOURCE: Neftekhimiya, v. 5, no. 3, 1965, 399-405

TOPIC TAGS: lubricant additive, antioxidant, metal dialkyl thiophosphate, oxidation inhibitor

ABSTRACT: Metal dialkyl dithiophosphates, particularly those of zinc, are antioxidants of hydrocarbons and find application as lubricant additives. Unlike other antioxidants, such as various phenols, metal dialkyl dithiophosphates not only inhibit the initiation of oxidation (extend the induction period), but also continue to inhibit the propagation steps of oxidation. Preliminary experiments had shown that the specific action of metal dialkyl dithiophosphates depends on the formation of secondary products. In the present work, the antioxidative effectiveness of several metal dialkyl dithiophosphates

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was examined as a function of their prior heat treatment. It was found that nickel di-n-decyl dithiophosphate acted most effectively as an antioxidant for a mixture of alkanes and cyclanes when the antioxidant had been kept for 5 hours at 180C under nitrogen. Similarly, zinc diisobutyl dithiophosphate was most effective as an antioxidant when prior heat treatment had been conducted at 225C; higher or lower temperatures decreased its effectiveness. Other compounds of this type exhibit similar behavior. Heating of the above compounds in air proved as effective as heating under nitrogen. It was concluded that metal dialkyl dithiophosphates are changed by heat treatment into substances which combine with oxidation products of hydrocarbons to form effective antioxidants. Orig. art. has: 4 figures. [VS]

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. B. Topchiyeva
AN SSSR (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 030ct64

ENCL: 00

SUB CODE: FF, IC

NO REF SOV: 006

OTHER: 004

ATD PRESS: 4032

Card 2/2

MELENT'YEVA, T.A.

YUR'YEV, Yu.K.; MEZENTSOVA, N.N.; MELENT'YEVA, T.A. TRESHCHOVA, Ye.G.

The chemistry of selenophene. Part 7: Synthesis and acetylation
of 3-arylselenophenes and 2,3-benzoselenophene. Zhur. ob. khim.
27 no.8:2260-2267 Ag '57. (MLBA 10:9)

1. Moskovskiy gosudarstvennyy universitet.
(Selenophene)

5 (3)

AUTHORS:

Masteryukova, T. A., Melent'yeva, T. A., SOV/79-29-7-18/83
Shipov, A. E., Kabachnik, M. I.

TITLE:

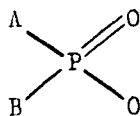
The Application of the Hammett (Gammelte ?) Equation to the Ionization Constants of Organophosphoric Acids in 7- and 80 % Alcohol (Primeneniye uravneniya Gammelta k konstantam ionizatsii fosfororganicheskikh kislot v 7 i 80 % spirte)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2178-2182 (USSR)

ABSTRACT:

In connection with investigations in the field of the tautomerism of organophosphorus compounds (Ref 3) the authors determined the apparent ionization constants of the phosphoric acid series of the general formula:



in 7- and 80 % alcohol. It was of interest to investigate to what extent the Hammett (Gammelte ?) equation ($\lg \frac{K}{K_0} = \rho \Sigma \sigma$) holds in the case of these solvents. It was especially interesting because the authors determined the ionization constants of some types of phosphoric acids which earlier had not been measured, i.e. of diaryl

Card 1/3

The Application of the Hammett (Gammelte ?) Equation 307/79-29-7-18/83
to the Ionization Constants of Organophosphoric Acids in 7- and 80 % Alcohol

phosphinic-(A=B=Ar) and diaryl phosphoric acid (A=B=ArO). The results obtained, together with some other data marked with asteriks (Ref 3) are given in table 1. The constants σ for the aroxy groups at the phosphorus have hitherto been unknown. Their apparent ionization constants (pK_1 and pK_2) of phenyl and diphenyl phosphoric acid as well as of tolyl and ditolyl phosphoric acid were determined in 50 % alcohol as far as the constants ρ and pK for the ionization of phosphoric acids in this solvent are computed precisely enough (Ref 1). The results obtained (Table 2), from which the mean values σ for the groups C_6H_5O and C_7H_7O were computed, may be found in the last column of table 2. The values found σ were used for plotting the diagram $pK_f(\sum \sigma)$ for 7- and 80 % alcohol and then exactly determined by means of the data obtained from the two solvents. The final mean values for the groups C_6H_5O and $CH_3C_6H_4O$ are written down provisionally. There are 1 figure, 4 tables, and 17 references, 3 of which are Soviet.

Card 2/3

The Application of the Hammett (Gammelte ?) Equation SOV/79-29-7-18/83
to the Ionization Constants of Organophosphoric Acids in 7- and 80 % Alcohol

ASSOCIATION: Institut elementoorganicheskikh soedineniy Akademii nauk SSSR
(Institute of Elemental Organic Compounds of the Academy of
Sciences, USSR)

SUBMITTED: March 10, 1958

Card 3/3

5(2,3,4)

AUTHORS:

Kabachnik, M. I., Academician,

SOV/20-124-5-27/62

Masteryukova, T. A., Shipov, A. E., Melent'yeva, T. A.

TITLE:

The Use of Hammett's Equation in the Theory of Tautomeric Equilibrium (Primeneniye uravneniya Gammetta v teorii tautomernogo ravnovesiya). The Thion-Thiol Tautomerism of Thiophosphoric Compounds (Tion-tiol'naya tautomeriya tiofosfornykh soyedineniy)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 5, pp 1061-1064 (USSR)

ABSTRACT:

The first and second authors have proved (together with S. T. Ioffe) that Broensted's (Brensted) equation is applicable to organo-thiophosphoric acids (Ref 3). The first author has also found that the relation between the equilibrium constant and the ionization constants of the forms $K_{1S} = K_{1S}/K_{2S}$ is of fundamental importance in the theory of tautomeric equilibrium. In accordance therewith the theory of Broensted-Izmaylov regarding the acid-alkali protolytic equilibrium (Ref 2) has been applied to the tautomeric equilibrium in solutions. Thus, a quantitative interpretation of the ion theory

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The Use of Hammett's Equation in the Theory of Tautomeric Equilibrium. The Thion-Thiol Tautomerism of Thiophosphoric Compounds

SOV/20-124-5-27/62

of tautomerism has been suggested. The fact that Broensted's equation is applicable to the organo-thiophosphoric acids rendered determination of the position of the tautomeric equilibrium of dialkyldithio-phosphoric acids (Ref 3) and of the alkylthioalkyl-phosphinic acids (Ref 4) possible. There was every reason to use Hammett's equation for the purpose stated in the title. This was possible with the aid of two equations (1). It must be borne in mind, however, that the experimental measurements did not give the ionization constants of individual forms but certain effective constants K_a , which have a certain relation ((2), Ref 7) to the ionization constants of the forms. The substitution of K_1 and K_2 from equations (1a) and (1b) in relation (2) enables the constant K_a to be easily derived from the parameters of Hammett's equation (3). This relationship is graphically expressed with the coordinates pK and $\sum \sigma$ by the curve $pK_a = \varphi(\sum \sigma)$, which is asymptotic to the two straight lines I and II (Fig 1).

Card 2/4

The Use of Hammett's Equation in the Theory of Tautomeric Equilibrium. The Thion-Thiol Tautomerism of Thiophosphoric Compounds

SOV/20-124-5-27/62

This facilitates a derivation of the experimental method of the quantitative solution to the problem. Table 1 gives the effective ionization constants (pK_a) of the series of the tautomeric acids $RR'P(S)OH \rightleftharpoons RR'P(O)SH$, which differ by the R and R' groups and consequently by the $\sum \sigma$ values (calculated according to references 6,9). As may be seen from figure 2, there is a good linear relationship for the points having $\sum \sigma$ values between -3 and -2. From the results obtained the parameters of the straight lines $pK_1 = pK_1^0 - \rho_1 \sum \sigma$ were determined, which define the ionization constants of the thion forms in 7 % and 80 % alcohol (least squares method, reference 10). The values found for the constants of the tautomeric equilibrium must satisfy Hammett's equation: $\log K_T = \log K_T^0 + \rho_T \sum \sigma$ (5). Figure 3 shows the diagrams illustrating the dependence of $\log K_T$ on $\sum \sigma$ based on the data of the table 1. As may be seen, the relationship according to Hammett has been expressed well

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The Use of Hammett's Equation in the Theory of Tautomeric Equilibrium. The Thion-Thiol Tauomerism of Thiophosphoric Compounds SOV/20-124-5-27/62

enough. Finally, the percentages of the thiol forms were calculated with the aid of the resulting equations for the solutions of all substances investigated (Table 1). Based on the deviations of the linear dependence of Hammett's pK_a of the tautomeric acids from σ (or $\sum \sigma$), a quantitative analysis of tautomeric equilibrium can thus be given. There are 3 figures, 1 table, and 10 references, 7 of which are Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute for Elemental-Organic Compounds of the Academy of Sciences, USSR)

SUBMITTED: January 26, 1959

Card 4/4

KABACHNIK, M.I.; MASTRYUKOVA, T.A.; BALUYEVA, G.A.; KUGUCHEVA, Ye.Ye.;
Shipov, A.E.; MELENT'YEVA, T.A.

Application of the Hammett equation to dithio phosphorus acids. Zhur.
ob. khim. 31 no.1:140-145 Ja '61. (MIRA 14:1)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR.
(Phosphorus acids)

MELENTIEVA, T.A.

"Diarylthiophosphinic acids and their properties."

Khimiya i Primeneniye Fosforeorganicheskikh Soedineniy (Chemistry and
Application of organophosphorus compounds) A. V. A. 200, ed.
Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1961, 112 pp.

Collection of complete papers presented at the 1960 Kazan Conference
Chemistry of Organophosphorus Compounds.

KABACHNIK, M.I.; MASTRYUKOVA, T.A.; MELENT'YEVA, T.A.

Conjugation in the systems having a tetrahedral atom. Diarylphosphinic
acids. Zhur. ob. khim. 32 no.1:267-272 Ja '62. (MIRA 15:2)
(Phosphinic acid)

KABACHNIK, M.I.; MASTRYUKOVA, T.A.; MELENT'YEVA, T.A.

Conjugation phenomenon in the systems with a tetrahedric
atom. Part 2: Vinylphosphinic acids. Zhur.ob.khim. 33 no.2:
382-388 F '63. (MIRA 16:2)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Phosphinic acid) (Conjugation (Chemistry)) (Vinyl compounds)

MASTRYUKOVA, T.A.; MELNI'T'YEVA, T.A.; KABACHNIK, M.I.

Reactivity of phosphorus triacid salts. Part 6: alkylation and phosphorylation reactions of potassium diphenyltinophosphate.
Zhur. ob. khim. 35 no.7:1197-1201 J1 '55. (MIRA 18:8)

KABACHNIK, M.I.; MASTRYUKOVA, T.A.; MELENT'YEVA, T.A.; DOMBROVSKIY, A.V.;
SHEVCHUK, M.I.

Conjugation in the systems with a tetrahedral phosphorus atom.
Part 1: Substituted benzoyltriphenylphosphinomethylenes. Teoret.
i eksper. khim. 1 no.2:265-269 Mr-Ap '65. (MIRA 18:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR, Moskva
i Chlenovitskiy gosudarstvennyy universitet.

(7)

L 00707-66 ENT(m)/EMP(j) RM/CD-2

SOURCE CODE: UR/0062/65/000/005/0895/0898

ACC NR: AP6012080

AUTHOR: Senyavina, L. B.; Sheynker, Yu. N.; Zheltova, V. N.; Dombrovskiy, A. V.;
Shevchuk, M. I.; Kabachnik, M. I.; Mastryukova, T. A.; Melent'yeva, T. A.

ORG: Institute of the Chemistry of Natural Compounds, AN SSSR (Institut khimii prirodnikh soedineniy AN SSSR).

TITLE: Infrared spectra of aroylmethylenetriphenylphosphoranes and their salts

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 5, 1965, 895-898

TOPIC TAGS: IR spectrum, organic salt, organic phosphorous compound, electron donor, cyclic group

ABSTRACT: The integral intensities of the carbonyl absorption in the infrared spectra of aroylmethylenetriphenylphosphoranes (in which the carbonyl group is bonded to a phenyl ring) and their salts were measured. The data were considered from the standpoint of electron donor and electron acceptor properties of the phosphorus atom and the aromatic rings of the aroyl group, as well as the influence of substituents in the aromatic ring on the absorption intensity. The addition of an aromatic group to the carbonyl in phosphoranes led to a decrease in the frequency and intensity of the valence vibration of the carbonyl group in comparison with the corresponding aliphatic derivatives, evidently as a result of the functioning of the aromatic ring as an electron acceptor, competing with the carbonyl group for electrons from the strong electron-donor phosphorus atom. The frequency and in-

UDC: 543.422

Card 1/2

L 20107-46

ACC NR: AP6012080

Intensity of the C=O vibration are also determined by the configuration of the molecule, determined in turn by the size of the substituent at the carbonyl group. In phosphorane salts, the tetravalent positive phosphorus plays the role of an electron acceptor, resulting in a sharp drop in the intensity of the C=O band in comparison with phosphoranes. The absorption bands in the region of $1317-1390\text{ cm}^{-1}$ for arylmethylenetriphenylphosphoranes and $1389-1412\text{ cm}^{-1}$ for aroylmethyltriphenylphosphoranes were tentatively assigned to the vibration of the P=C band. Orig. art. has: 2 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 20Jul64 / ORIG REF: 005 / OTH REF: 004

Card 2/2/12612

MOLDAVSKIY, B.I.; prinyimayushchiye : BLINOVA, M.V.; BABEL',
V.G.; BUSIOVICH, Ye.Ya.; RUDAKOVA, R.I.; MELENT'YEVA, T.G.;
USHAKOVA, M.Sh.; RUBINSHTEYN, E.I.; ROZENBLIT, S.K.

Production of dicarboxylic acids from hydroxy acids.
Khim.prom 2:112-115 My '60. (MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neft-
yanoy khimii.

(Acids)

MELENT'YEVA, T. G.; PAVLOVA, L. A.; VENUS-DANILOVA, E. D.

Hydroxydihydrofurans. Part 8: 3,3-dimethyl-tert-butylacetylenyl-
1-hydroxyphthalan. Zhur. ob. khim. 33 no.1:55-59 '63.
(MIRA 16:1)

1. Leningradskiy tekhnologicheskij institut imeni Lensoveta.

(Phthalan)

MELENT'YEVA, T.G.; PAVLOVA, L.A.; VENUS-DANILOVA, E.D.

Hydroxydihydrofurans. Part 9;

3,3-Dimethyl-1-phenylacetylenyl-1-hydroxyphthalan. Zhur.ob.khim.
33 no.6:1851-1857 Je '63. (MIRA 16:7)

1. Leningradskiy tekhnologicheskij institut imeni Lensoвета.
(Phthalan)

MELENT'YEVA, T.G.; PAVLOVA, L.A.; VENUS-DANILOVA, E.D.

Hydroxydihydrofurans. Part 10:

3,3-dimethyl-1-p-tolylacetylenyl-1-hydroxyphthalan. Zhur.ob.khim.
33 no.7:2126-2129 J1 '63. (MIRA 16:8)

1. Leningradskiy tekhnologicheskij institut imeni Lenooveta.
(Phthalan)

MELENT'YEVA, T.G.; PAVLOVA, L.A.; VENUS-DANILOVA, E.D.

Hydroxydihydrofurans, Part 11: 3,3-dimethyl-1-methylacetylenyl-1-hydroxyphthalan. Zhur. ob. khim. 33.no.8:2548-2552 Ag '63.
(MIRA 16:11)

1. Leningradskiy tekhnologicheskii institut imeni L. S. Soveta.

MELENT'YEVA, T.G.; PAVLOVA, L.A.; VENUS-DANILOVA, E.D.

Hydroxydihydrofurans. Part 12: Basic properties of the isomeri-
zation products of acetylenic hydroxyphthalans. Zhur. ob. khim.
34 no.7:2267-2275. L. '64 (MIRA 17:8)

1. Leningradskiy tekhnologicheskii institut imeni Lensoveta.

SAVICH, I.G., MELENT'YEVA, T.G.; PAVLOVA, I.A.

Study of hydrogen bonding in hydroxyphthalanes by infrared spectroscopy. Zhur. ob. khim. 35 no.3:415-419 Mr '65.
(MIRA 18.4,

1. Leningradskiy tekhnologicheskii institut imeni Lensoveta.

MELENT'YEVA, T.G.; PAVLOVA, L.A.

Acid-base conversions of hydroxyphthalans. Zhur. khim. 35
no.10:1739-1742 O '65. (MIRA 12:10)

1. Leningradskiy tekhnologicheskii institut imeni Leninsoveta.

LEBEDEV, Lev Georgiyevich; MERTSALOV, Valentin Grigor'yevich;
MELENT'YEVA, V., red.; NAZAROVA, A., tekhn. red.

[At various latitudes] Na raznykh shiroтах. Moskva, Izd-
vo "Znanie," 1963. 125 p. (MIRA 16:11)
(Voyages and travels)

MELENT'YEVA, Ye. L.

USSR.

V 1044. PRODUCTION OF ALCOHOLS FROM REACTION WATER OBTAINED IN SYNTHESIS. Bazradetskii, G.N. and Melent'eva, E.L. (Trud. vsesoyuz. nauch.-issled. inst. iskust. shid. topliva i gaza (Proc. All Union Sci.-Res. Inst. Synthetic Liquid Fuel and Gas), 1954, (6), 90-104; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1955, (2), 2808). The quantities and natures of the alcohols found in the reaction waters from the synthesis of hydrocarbons from carbon dioxide and hydrogen over iron, iron-copper and commercial cobalt catalysts have been determined. In order to separate the alcohols, the reaction waters were first neutralized with a 10% solution of alkali to a neutral or slightly alkaline reaction and then concentrated by distillation. The concentrated neutral oxygen compounds were subjected to distillation in a highly effective column with 57 plates and the individual alcohols were separated. A method has been worked out for concentrating the reaction water in continuously operating plant. In order to obtain 70% alcohol concentrates it is necessary to maintain a temperature of 96°C in the vapour while the reaction water is fed at 0.37-0.44 ml/min sq. cm. The refractive index of the alcohol concentrates (raw alcohols) varies from 1.360 to 1.366. The following industrial alcohols are separated by fractionation with the highly effective column: methyl, ethyl, propyl, amyl and higher. The industrial alcohols are below standard purity. The following are percentages of alcohols obtained over iron, iron-copper and cobalt catalysts respectively: methyl 2 - 7; 13 - 25; 13.6; ethyl 48; 62; 32 - 35; 35; propyl 7 - 14; 8 - 15; 12.8; higher alcohols 5 - 13; 8 - 16; 19.8.

MELENT'YEVA, Ye. L. Cand Tech Sci -- (diss) "Separation and reprocessing
of multiple-component ^{соединения} ~~compounds~~ of phenols and hydrocarbons." Mos, 1959.
13 pp (Acad Sci USSR. Inst of Combustible Minerals IGI), 150 copies
(KL, 52-59, 121)

-75-

MEL ENT YEVA, Y. N.

MELIK-AKHNAZAROV, Kh. Yu.; MELENT'YEVA, Ye. N.

Azerbaijan S.S.R. ~~Nauka i pered. op.~~ v sel'khoz. 7 no. 11:20-21 N '57.
(MLBA 10:11)

1. Direktor pavil'ona "Azerbaydzhanskaya SSR" Vsesoyuznoy sel'sko-khozyaystvennoy vystavki (for Melik-Akhnazarov). 2. Glavnyy metodist pavil'ona "Azerbaydzhanskaya SSR" Vsesoyuznoy sel'skokhozyaystvennoy vystavki.

(Azerbaijan--Agriculture)

GOLODKOVSKIY, V.L.; MELENT'YEVA, Ye.V.

Dynamics of the destruction of alfalfa plants by cuttings during the first year of life as related to varying densities of stand and irrigation conditions. Izv. AN Uz. SSR no. 10:45-50 '56.

(MIRA 14:5)

(Alfalfa)

MELENT'YEVA, Ye.V.

Accumulation of the root mass in alfalfa and the amount of nitrogen
and phosphorus in it. Izv.AN Uz.SSR no.11:57-62 '56. (MIRA 14:5)
(Alfalfa) (Roots (Botany))

MELENT'YEVA, Ye. V., Cand Agr Sci -- (diss) "Effect of norms
of sowing ^(and irrigation modes) upon the yield of forage mass of alfalfa and root
accumulation on serozem soils of Tashkentskaya Oblast."
Stalinabad, 1957. 18 pp (Acad Sci Tadzhik SSR, Department
of Natural Sci), 100 copies (KL, 52-57, 109)

- 93 -

USSR/Cultivated Plants - Grains.

M.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15561

Author : Ye. V. Melent'yeva

Inst : -

Title : The Best Corn Hybrids and Varieties in Uzbekistan.
(Luchshiye gibridy i sorta kukuruzy v usloviyakh
Uzbekistana).

Orig Pub : Kukuza, 1957, No 6, 31-34.

Abstract : No abstract.

Card 1/1

L 4927-66 EWT(m)/EWP(j)/T/EWP(t)/EWP(b) IJP(c) JD/JG/RH

ACC NR: AP5026579

SOURCE CODE: UR/0073/65/031/010/1031/1035

AUTHOR: Kononenko, L.I. ; Malent'yeva, Ye. V. ; Vitjun, R. A. ; Poluektov, N. S. 24
B

ORG: Odessa Laboratory, Institute of General and Inorganic Chemistry (Institut obshchey i neorganicheskoy khimii, Laboratorii v Odesse)

TITLE: Complexes of rare earth elements with acetylacetone and 1, 10-phenanthroline or 2, 2'-dipyridyl 10

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 10, 1965, 1031-1035

TOPIC TAGS: yttrium compound, lanthanum compound, praseodymium compound, neodymium compound, samarium compound, europium compound, gadolinium compound, terbium compound, erbium compound, fluorescence spectrum

ABSTRACT: Ternary compounds formed by a rare earth metal with acetylacetone (AA) and phenanthroline (Phen) or dipyridyl (Dip) were synthesized from Y, La, Pr, Nd, Sm, Eu, Gd, Tb, and Er, and their composition and properties were studied. Chemical analyses showed that the ratio Me:Dip:AA is very close to 1:1:3. The probable structure of such ternary compounds with Eu and 2, 2'-dipyridyl may be represented as follows:

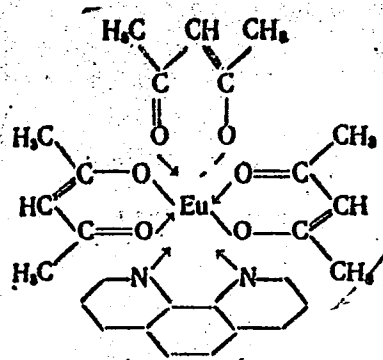
Card 1/2

UDC 541.49:546.65:535.372

0901 1386

L 4927-66

ACC NR: AP5026579



In connection with the use of rare earth β -diketonates in laser applications, the fluorescence characteristics of simple and ternary europium and terbium acetylacetonates are compared, and the spectra of the $\text{Eu}^5\text{D}_0 \rightarrow ^7\text{F}_2$ and $\text{Tb}^5\text{D}_4 \rightarrow ^7\text{F}_5$ bands are illustrated. It was found that the presence of acetylacetonate in the molecule of the complex increases the fluorescence brightness of terbium and reduces the fluorescence of europium. The fluorescence spectra of the dipyrrolyl complexes are similar to those of the phenanthroline complexes. Orig. art. has: 4 figures and 1 table.

SUB CODE: IC / SUBM DATE: 09May64 / ORIG REF: 005 / OTH REF: 005

CC
Card 2/2

ACC NR: AP6019048 (N) SOURCE CODE: UR/0078/66/011/002/002/0369/0373

AUTHOR: Melent'yeva, Ye. V.; Kononenko, L. I.; Poluektov, N. S.

ORG: none

TITLE: 1,10-Phenanthroline-dibenzoylmethane complexes of rare-earth elements

SOURCE: Zhurnal neorganicheskoy khimii, v. 11, no. 2, 1966, 369-373

TOPIC TAGS: rare earth element, samarium compound, europium compound, quantitative analysis, luminescence

ABSTRACT: The composition and some properties of the rare-earth complexes were studied, representing ternary systems composed of the rare-earth element, 1,10-phenanthroline (Phen), and dibenzoylmethane (DBM). An investigation of the isomolar series, turbidimetric determinations, and the quantitative analysis proved that the complexes showed a 1:1:3 molecular ratio of rare-earth element:Phen:DBM. The analytical results of the complexes studied are given in Table 1. The Sm and Eu complexes emitted luminescence at the 550-630 and 570-640 mμ ranges, respectively. The luminescence study of benzene solutions of the Eu complex showed that the 1:1:3 ratio remained valid. Orig. art. has: 8 fig. and 1 table.

Card 1/3

UDC: 546.65 : 541.49

ACC NR: AP6019048

Table 1. Results of the analysis of the Phen-DBM complexes of rare-earth elements

Complex	Color	Melting temp. C	Calculated, %			Found, %			Ratio Me:Phen: DBM
			Me	Phen	DBM	Me	Phen	DBM	
Y-Phen-3 (DBM)	yellow	180—182	9,47	19,26	71,27	9,36	19,15	71,15	1:1:3,03
Nd-Phen-3 (DBM)	lilac	182—183	14,50	18,13	67,37	14,33	18,06	67,30	1:1,01:3,04
Sm-Phen-3 (DBM)	yellow	182—184	15,03	18,02	66,95	15,00	17,90	66,85	1:0,95:3,00
Eu-Phen-3 (DBM)	straw-yellow	184—186	15,17	17,98	66,85	15,09	17,86	66,75	1:1:3,00
Tb-Phen-3 (DBM)	yellow	185—186	15,77	17,85	66,38	15,60	17,80	66,30	1:1:3,03

Card 2/3

ACC NR: AP6019048

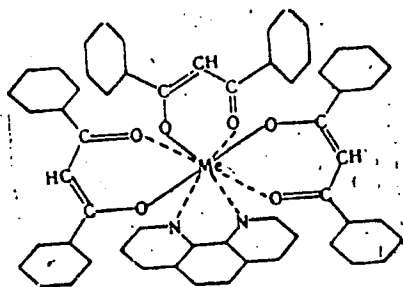


Fig. 1. Structure proposed for the complexes; Me = rare-earth element

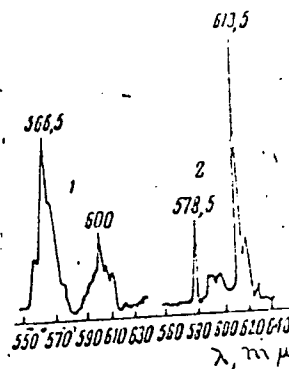


Fig. 2. Fluorescence spectra of the Me-Phen-DBM₃ complexes; 1 = Sn, 2 = Eu

SUB CODE: 07/ SUBM DATE: 15Jun64/ ORIG REF: 006/ OTH REF: 003

Card 3/3

BABITSKIY, B.L.; VINITSKIY, L.Ye.; DROZDOVSKIY, V.F.; DYUBKO, L.D.; KAPLUNOV, Ya.N.; MELENT'YEVA, Z.G.; SHOKHIN, I.A.; Prinsipali uchastiye:
ZHIL'TSOVA, A.A.; LEVIT, R.G.; YAKOVLEV, D.A.

Effect of filling reclaimed rubber on the dielectrical properties of
the reclaimed product. Kauch. i rez. 24 no.5:22-25 My '65.
(MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo
transporta i Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

S/137/62/000/004/013/201
A006/A101

AUTHORS: Bardin, I. P., Gess-de-Kal've, B. A., Kanavtsev, P. I., Vavilov, N. S., Melenzhnev, P. N., Diyeu, V. Ye.

TITLE: Reduction of ore-fuel granules in a suspended gushing layer for the purpose of obtaining sponge iron

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 17, abstract 4V121 (V sb. "Fiz. khim osnovy proiz-va stali", Moscow, AN SSSR, 1961, 168-176)

TEXT: The authors describe a process of reducing ore-fuel granules (of 2 - 3 mm size) obtained by the chemical catalytical method developed by the Institute of Fuel Minerals and the Institute of Metallurgy imeni A. A. Baykov. The granules were prepared from KMA ore concentrates with coal coke and peaty semicoke. Reduction was performed in a suspended gushing layer in a laboratory metallic single-stage reactor with the aid of preheating reducing gas, which was then burnt for the external heating of the reactor. Reduction proceeded particularly intensively at $> 900^{\circ}\text{C}$; within 5 minutes a reduction degree of 90% was attained. The granules did not stick together or onto the reactor walls. Data

Card 1/2

S/137/62/000/004/013/201
A006/A101

Reduction of ore-fuel granules ...

are obtained for the design of a semi-industrial unit. For the industrial assimilation of the method the granules should be manufactured from very rich concentrates, containing 65 - 70% Fe. Laboratory melting of the sponge-Fe obtained shows that it may be used as a scrap substitute in steel production. There are 7 references.

A. Pokhvisnev

Abstracter's note: Complete translation]

Card 2/2

MELEROVICH, A. Ye.

On Kojewnikov's epilepsy of traumatic origin. Nevropat.
psikhiat., Moskva 20 no.3:29-30 May-June 1951. (CIML 20:11)

1. Candidate Medical Sciences. 2. Of the Clinic for
Nervous Diseases (Director -- Prof. G. G. Sokolyanskiy),
Yaroslavl' Medical Institute.

MEIEROVICH, A.Ye., kandidat meditsinskikh nauk.

Syndromes of lesions of the otorhinolaryngological organs in syringomyelobulbia. Vest.oto-rin. 16 no.1:50-53 Ja-P '54.

(MLBA 7:3)

1. Iz kliniki nervnykh bolezney (direktor - professor G.G.Sokolyanskiy) Yaroslavskogo meditsinskogo instituta i nervnogo otdeleniya oblastnoy bol'nitsy.

(Otorhinolaryngology) (Syringomyelia)

SOKOLYANSKIY, G.G., professor; MELEROVICH, A.Ye.

Differential diagnosis of vascular diseases from tumors of the brain.
Vop.neirokhir. 19 no.3:3-9 My-Je '55. MLRA 8:6)

1. Iz kliniki nervnykh bolezney Yaroslavskogo meditsinskogo instituta.

(BRAIN, neoplasms,

differ. diag. from thrombosis)

(CEREBRAL EMBOLISM AND THROMBOSIS, differential diagnosis,
neoplasms)

SOKOLYANSKIY, G.G., professor; MELEROVICH, A.Ye., kandidat meditsinskikh nauk

Arterial pressure in syringomyelia. Sov.med. 20 no.11:18-23 N '56.
(MLRA 10:1)

1. Iz kliniki nervnykh bolezney (dir. - prof. G.G.Sokolyanskiy)
Yaroslavskogo meditsinskogo instituta.

(SYRINGOMYELIA, physiol.

blood pressure in)

(BLOOD PRESSURE, in various dis.
syringomyelia)

MELEROVICH, A.Ye., kandidat meditsinskikh nauk; LYANDE, V.S., doktor meditsinskikh nauk

Laryngeal lesions in syringomyelia. Vest.oto-rin.19 no.2:89-95
Mr-Apr '57. (MLRA 10:6)

1. Iz kafedry nervnykh bolezney (zav. - prof. G.G.Sokolyanskiy)
Yaroslavskogo meditsinskogo instituta i oto-laringologicheskogo
otdelelniya (zav. - doktor meditsinskikh nauk V.S.Lyande) Yaroslavskoy oblasti bol'nitsy.

(SYRINGOMYELIA, compl.

laryngeal paralysis, ther. (Rus))

(LARYNX, paralysis

in syringomyelia, ther. (Rus))

MELEKOVICH, A. Ye.

MELEKOVICH, A. Ye., kand.med.nauk (Yaroslavl')

Changes in the alimentary canal in syringomyelia. Klin.med. 35
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1. Iz kliniki nervnykh bolezney (dir. - prof. G.G.Sokolyanskiy)
Yaroslavskogo meditsinskogo instituta i Oblastnogo gospihalya
invalidov Otechestvennoy boyny (nach. - polkovnik meditsinskoy sluzhby
G.Ye.Lopatukhin)

(STOMACH--DISEASES) (SYRINGOMYELIA)

MELEROVICH, A.Ye.

Significance of traumatic factors in the development of syringomyelia
[with summary in French]. Zhur.nevr. i spikh. 57 no.5:600-604 '57.

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1. Klinika nervnykh bolezney (dir. - prof. G.G.Sokolyanskiy)
Yaroslavskogo meditsinskogo instituta i nervnoe otdeleniye Yaro-
slavskoy oblastnoy bol'nitsy (glavnyy vrach Z.M.Kunitsyna)

(SYRINGOMYELIA, etiology and pathogenesis,
traum. (Rus))

KLYUCHIKOV, Valentin Nikolayevich; MELEROVICH, Anna Yefimovna; ZAIKINA.
M.G., red.

[Paralysis] Paralichi. IAroslavl, IAroslavskoe knizhnoe izd-vo,
1958. 87 p. (MIRA 19:9)
(PARALYSIS)

KARABEL'NIK, B.K.; DARON, D.Ya.; SERDYUKOVA, O.G.; MELEROVICH, Ye.Ye.;
MUSATOVA, N.I.

Results of psycho-prophylactic method in painless labors. Akush.gin.
no.2:29-31 Mar-Apr 51. (CLML 20:8)

1. Candidate Medical Sciences B.K. Korabel'nik; Candidate Medical
Sciences D.Ya. Daron. 2. Of the Amalgamated Maternity Home no.32
(Head Physician--B.K. Korabel'nik), Krasnopresnenskiy Rayon, Moscow.

11-2-26 11/11/71
GLUZMAN, Ye. B.; WELER'YAN, Ye. A.

Bioelectric characteristics of electroshok. Zh. nevropat.
psikhiat., Moskva 52 no.3:17-21 Mar 1952, (CLML 22:2)

1. Candidate Medical Sciences for Gluzman. 2. Of the Clinic
for Borderline Conditions (Head -- Prof. A. L. Abashev-Konstantinovskiy)
and Department of Electrophysiology (Head -- Senior Scientific
Associate N. V. Serenov) of Kiev Psychoneurological Institute
(Director -- P. S. Farasenko; Scientific Assistant to Director --
Prof. B. N. Man'kovskiy, Active Member AMS USSR).

POPOV, S.D., vrach; ABRAMOVA, O.I., operatsionnaya sestra; MELESHCHENKO,
A.M., operatsionnaya sestra (Leningrad)

Device for rewinding surgical silk thread. Med.sestra 21
no.12:49-50 D '62. (MIRA 16:4)
(SURGICAL INSTRUMENTS AND APPARATUS)

CHASHNIKOV, A.A.; MELESHCHENKO, D.P.

Unusual case of fracture of the humerus with injury of the radial nerve. Khirurgiia no.4:81 Ap '54. (MLRA 7:6)

(SHOULDER, fractures,

*compl., radial nerve inj.)

(FRACTURES,

*shoulder, with radial nerve inj.)

(NERVES, RADIAL, wounds and injuries,

*in shoulder fract.)

MELESHCHENKO, D.P. (Krasnodar)

Case of myoplegia. Vrach.delo no.11:1205-1207 N'58 (MIRA 12:1)
(PARALYSIS)

MELESHCHENKO, I.

Both the customers and the hosts are workers. Obshchestv.pit.
no.2:9-11 F '60. (MIRA 13:6)

1. Zaveduyushchiy stolovoy No.13 Levoberezhnogo tresta stolovykh,
Novosibirsk.
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MELESHCHENKO, K.F., aspirant

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1. Iz Ukrainського nauchno-issledovatel'skogo instituta kommunal'noy
gigiyeny.
(BENZENE—TOXICOLOGY) (WATER—POLLUTION)

MELESHCHENKO, K.F., aspirant

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and estimation of its solubility. Gig. i san. 25 no. 5:54-57
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(WATER—POLLUTION) (BENZENE)

MELESHCHENKO, K. P., Cand Med Sci -- "Hygienic ^{substitution} ~~tests~~ of the
maximum ^{permissible} ~~admissible~~ concentration of trichlorbenzene in the
water of reservoirs ^{ms} ~~under~~ conditions of draining ^{of} sewage waters
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Leningrad. Submitted November 30, 1965.

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"The Discovery of Coal in the Devonian Saxites on the Western Slope of the South Urals,"
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MELESHCHENKO, V.S.; NEKHOROSHEV, V.P.; NALIVKIN, B.V.; NOVOZHILOV, N.I.;
OBRUCHEV, D.V.; RZHONSNITSKAYA, M.A.; YANOV, E.N.; SPIRINA, N.I., redaktor;
GUROVA, O.A., tekhnicheskii redaktor

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MELESHCHENKO, V.S.; NOVOZHILOV, N.I.

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MELESHCHENKO, V.S.

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Sayan-Altai fold region. Inform.sbor.VSEGRI no.3:20-27 '56.
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